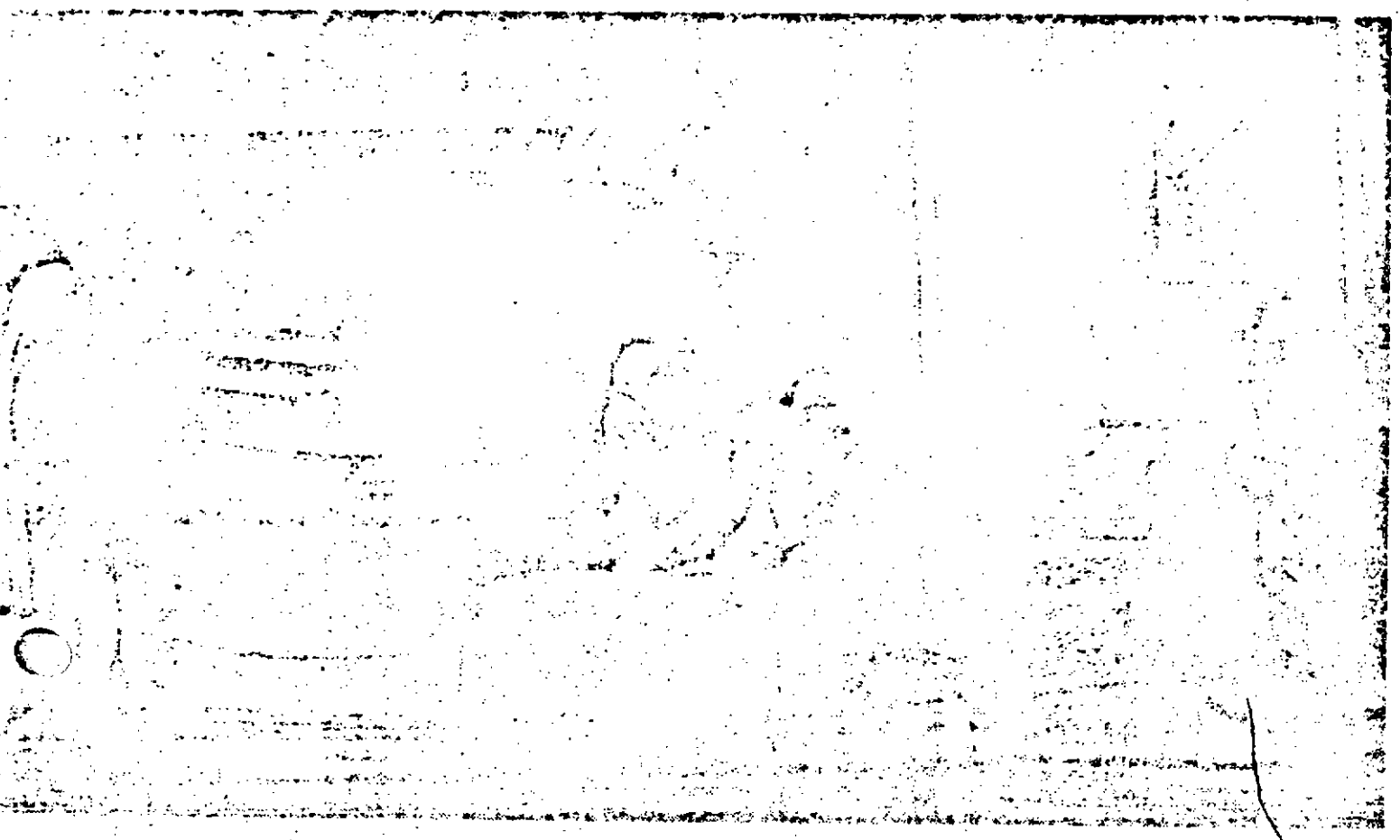


June 1, 1970

The Exposure of 24 Firemen
to Methyl Bromide
On October 5, 1973
At
Belmont, California

Rolling Away the Poison



A. P. photo

Looking like spacemen, firemen in asbestos protective clothing gingerly handled the 300-pound gas canister

Fumes on Peninsula--18 in Hospital

At least 18 persons including seven firemen were hospitalized yesterday after inhaling a deadly rat fumigant in Belmont.

The visible gas, which came from a 300-pound canister, forced 1500 persons to leave a ten-block area for

2½ hours, brought helicopters to the scene to broadcast warnings, and proved too much for one fire department's gas masks.

The highly toxic fumes — a combination of methyl bromide and chloropicrin — began wafting into the air

about noon outside Grandma's Motorcycle Shop at 1707 Old County road, west of the Bayshore Freeway between Belmont and San Carlos.

who has a sign shop in the same building, had obtained the canis-

ter from a business neighbor, the Howard Tire Co. to "make a nice stand-up fireplace," said Mike Urgo, co-owner of the motorcycle shop.

When rolled the

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SF. Chronicle - Oct 6, 1973

POISON FUMES

From Page 1

canister into a nearby vacant lot and unscrewed the top, some liquid inside turned to gas and began pouring out.

called the Belmont Fire Department, but firemen who tried to cap the tank found their gas masks and protective clothing no match for the chemical. Special asbestos suits had to be obtained from the Redwood City Fire Department.

About 1:20 p.m. those firemen succeeded in capping the tank.

But by then clouds of the deadly fumigant were drifting around the neighborhood. The area had been cordoned off, and two San Mateo county sheriff's helicopters were circling overhead warning residents by loudspeaker of the danger.

At Sequoia Hospital in Redwood City, where 11 victims were taken, Dr.

said two Belmont firemen were nauseated and vomiting, and others complained of chest discomfort and eye irritation.

Nurses said all the victims were in satisfactory condition but were being held for

observation overnight.

Three other persons were hospitalized at Chope Community Hospital, and a Highway Patrolman was treated for dizziness and eye irritation at Stanford-Palo Alto Hospital.

One of those hospitalized was

Of the two agents in the chemical fumes, chloropicrin is visible (sort of like tear gas), so sheriff's department officials could determine when the fumes had dispersed enough to make the neighborhood safe.

The "all clear" was declared at 3:45 p.m., but there was still the problem of getting rid of the tank.

The Coast Guard declined to send a helicopter to pick it up and dump it in the Pacific. The Army was equally unhelpful.

After several phone calls, the sheriff's office located a Milpitas firm.

Inc., which had delivered the tank of fumigant to the tire shop behind Grandma's and sign business.

"Maclean sent a pickup truck and hauled it away," said Ergo. "It had a real bad stink."

old 'L CENTER
4305

ST-PESFAR
HE DIVISION

DO NOT
IN THIS

Patient was exposed to an open canister of waste gas containing methyl bromide, tear gas, and other unknown substances. Although the patient was wearing an asbestos suit, including a hood, chest protector and leggings, some gas entered his suit.

abnormal exercise study with widening of A-a gradient
chronic sputum production since beginning
to winter commenced Oct 73

Findings: Essentially normal chest

16. Further treatment (Estimated Frequency & Duration) *None 1990/*

18.) Describe any permanent disability or disfigurement expected (State if None) *None* *to* *her*

Mr. L. J. Lippman

19. If death ensued, give date N/A

REMARKS (Note any pre-existing injuries, or disease, need for special examination or laboratory tests, other pertinent information)

patient has swelling, burning,

D. H. H. H.

Pesticide Accident Investigation

By Environmental Protection Agency - S.F.

Environmental Investigator (Pesticides)

INV 6

6 NOV 1973

Director, Surveillance & Analysis Division

I. Background:

At about 11:30 a.m., Friday, October 5, 1973, a Belmont sign painter, uncrewed a rusted fitting on an old propane tank and was quickly struck in the face with what later turned out to be a toxic mixture of methyl bromide and chloroform. Within the next few hours, seventeen people were hospitalized, police and fire personnel were on the scene and the EPA Regional Office responded with a computer printout (see attachments) giving information as to the handling, storage, and procedures for dealing with the chemical and its exposure victims.

II. The investigation:

On Thursday, October 4, 1973, a Belmont sign painter asked Elpidio Barbera, Manager of Howard Tire Service of Industrial Road, Belmont if he could buy an old propane cylinder standing behind the tire store with some other rubbish. Barbera replied that it wasn't their property but that the cylinder had been a nuisance to Howard Tire Service since they had moved into the premises about two years before. Children had been playing on and around the cylinder so Barbera gave Nunes permission to take the abandoned cylinder. Barbera suspected the cylinder had been left behind by the former tenants, Neil Maclean Company, now called Maclean Chemicals of Milpitas, California, a pesticide-producing company.

That evening at 6:00 p.m. with the help of a friend, he hoisted the cylinder aboard a pickup and drove it three blocks to his shop on Old County Road in Belmont. He noted that there was liquid sloshing inside the cylinder, which he assumed was liquid propane. He wanted to cut the top off the cylinder and make an indoor fireplace out of it.

At 11:30 a.m. the next day, October 5, 1973, he began his fireplace project in an empty lot next to 1727 Old County Road, Belmont. He tipped the cylinder on its side and began to unscrew one of the rusted, corroded old fittings on the top of the cylinder.

A liquid began flowing out which he thought was liquid propane but he was adversely affected by the fumes almost immediately, which he sensed were not propane fumes. He called the Belmont Fire Department at 11:50 a.m. and they responded with men, chemical suits and other equipment. Their regular rubberized respirators and gloves did not provide adequate protection probably because of the strong solvent properties of chloropicrin's action on plastic and rubber. Finally, men in completely enclosed asbestos suits were able to upright the cylinder and drive a tapered redwood plug into the fitting, which slowed the leakage. In the meantime fourteen Belmont firemen, two Redwood City firemen one California Highway Patrol officer and were all hospitalized and treated for toxic gas inhalation with oxygen. Some also had superficial skin irritation from contact with the methyl bromide-chloropicrin mixture which stuck to their rubber gloves and respirators.

After the leak was mostly sealed with the plug the firemen poured first water, then dry ice, and finally liquid nitrogen on the cylinder in an attempt to prevent further leakage but these efforts seemed ineffective.

In the meantime, sheriff deputies had been evacuating an estimated 1500 people from the immediate area of the gas leak. Namco Chemicals had been notified and volunteered to send a crew with a pickup truck to remove the cylinder. A newspaper (see attached) reported that the Coast Guard had sent a helicopter to remove the cylinder but was unable to lift it. I was unable to verify this story.

Namco removed the cylinder at about 3:00 p.m. and took it to their plant in Milpitas where they found no pressure left in the cylinder but sealed the leak with a new valve (see picture).

All the injured people were released from the hospital within a few hours and only one fireman was still suffering after-effects when I interviewed Assistant Chief Alford on October 9, 1973.

Further investigation revealed that when Namco occupied the premises at Belmont they used the old propane cylinder as a sump container for waste fumigants. For example, when a customer returned fumigant tanks to Namco they pumped out any remaining contents into their sump which they claimed was mounted on a concrete platform behind the building and had plumbing connecting it to the inside of the building. When this sump became full, it was disposed of periodically, usually by soil injection at a job site. When Namco moved on July 1, 1971

they somehow forgot to take the waste tank with them.

Mr. Bill Gould, President of Namco Chemicals, explained that during the move the Company changed hands, a new director took over and in general it was a confusing time. He viewed his company's removal of the leaking cylinder as a "good samaritan" gesture. When asked by me if he thought Namco was responsible for the incident because they left the cylinder there, he was adamant in declaring no one had ever asked Namco to remove the cylinder. Furthermore, he said Howard Tire Service would have had to disconnect the cylinder's plumbing and remove it from its concrete stand in order to install the air compressor which Howard Tire Service had installed behind the building (see picture).

When I interviewed Mr. Barbera of Howard Tire Service he assured me that Howard had had to construct the concrete platform and plumbing for their air compressor when they first moved in on July 1, 1971. I surveyed the grounds of Howard Tire Service and could not find any concrete stand other than the one in the photo. Not being a judge of the age of concrete I could not tell how old the concrete stand was. So, it cannot be determined at this time which party is telling the truth. Did Namco just abandon the waste cylinder behind the building in a negligent fashion or did Howard Tire Service disconnect and discard the cylinder behind the building?

III. Conclusion:

The preceding question seems irrelevant in the light of the fact that under the PIFRA, as amended, we have no jurisdiction in this case for two reasons. First, there was no interstate shipment involved. Secondly, there was no intent to sell or ship the pesticide in question. In a conference with Louis T. Bartall, Jr., Senior Inspector for Agricultural Chemicals and Feed, San Francisco, who is also investigating this case, he told me that he did not think there was a violation of California's Food and Agricultural Code either.

Finally, Assistant Chief Ford of the Belmont Fire Protection District said he had turned the case over to a District Attorney for possible further action.

Interestingly enough, _____ settled for a \$250 payment from Namco's insurance company. Though this action does not admit liability by Namco, it does seem to strongly infer it.

IV. Recommendations:

Our hands appear tied in this case because of a lack of jurisdiction under the EPCRA, as amended. However, we may be called upon again to assist State or local agencies during emergencies in the handling and disposal of hazardous materials and pesticides in the future. In order to provide this service, I suggest Ron Clawson instruct some others in the Regional Office in how to retrieve this vital information from the Envirocon Computer Program.

V. Persons Contacted:

Bill Could, Nanco Chemicals
Dennis Frober, Nanco Chemicals
Alpio Barbera, Howard Tire Service
Richard Cunnerman, Doug Horn Corp., Belmont
Louis I. Bartell, Jr., Agricultural Chemical and Feed,
San Francisco
David L. Alford, Second Assistant Chief, Belmont Fire
Protection District

R M M

Robert M. Mandel

Attachments

cc: Louis I. Bartell, Jr., Agricultural Chemicals and Feed,
San Francisco
✓ Dr. Keith Maddy, Agricultural Chemicals and Feed, Sacramento
K. K. Kaneshiro, EPA, San Francisco
Brian Sturgess, EPA, San Francisco
David G. Mengle, Community Studies on Pesticides, Berkeley

Firemen Are Disabled by Rat Poison

Two Belmont firemen who inhaled a deadly rat fumigant more than a year ago have since been retired with permanent disabilities. Belmont Assistant Fire Chief David Alford said yesterday.

Eight other firemen, including Alford, are being treated for exposure to the deadly fumes.

The gas — a mixture of methyl bromide and chloropicrin — came from a 300-pound canister outside Grandma's Motorcycle Shop at 1707 Old Country road, west of the Bayshore Freeway between Belmont and San Carlos.

a businessman who leased space in the building, had obtained the canister from another nearby business, to "make a nice standup fireplace," investigators reported.

Fumes began pouring from the canister about noon on October 5, 1973.

At least 18 persons, including seven firemen, were hospitalized after inhaling the deadly fumes, which poured out after the would-be fireplace builder unscrewed a cap from the top of the canister.

Because the poison's effects are sometimes delayed, other persons have since claimed injury from exposure.

On October 2 of this year, 21 persons who claimed they suffered from the incident filed a \$2.3 million suit against Allied Equities, Inc., which makes and sells the fumigant, and a division of Allied called Namco.

The suit is still pending in San Francisco Superior Court.

The two firemen who have had to retire because their lungs were permanently damaged by inhaling the fumes are Battalion Chief 45, and Fireman 44.

was hospitalized immediately after the incident for four months, Alford said. was taken ill much later.

Fireman was hospitalized only last Thursday for treatment of possible brain damage, Alford added.

Sacramento Bee - Nov. 14, 1974

Danger To Firemen

Effects Of Deadly Pest Gas Still Linger

BELMONT (UPI) — Twenty-four firemen and their families have been living for more than a year in frightening uncertainty about what will happen to them as the result of contact with a gas so poisonous that tear gas is mixed with it to warn of the invisible dangers.

Two of the men have already been forced to retire with serious lung ailments.

Two more have been put on sick leave because they have brain damage that causes dizziness and fainting.

At least 15 other firemen

have experienced physical problems since that day in 1973 when they went out on what seemed to be a routine call for help.

"It wasn't any fire at all," says Belmont Fire Chief Richard Weare.

who had a small paint shop, had found a small unmarked tank he thought would make a fine fireplace. He took it to a lot near his shop and began to pry off the top.

He smelled the tear gas that was in the tank to warn the unwary of its more deadly contents — methol-bromide, a powerful pest-control agent.

called the fire department.

"We did everything as far as safety as we could," says chief Weare. "We called for assistance from other nearby fire departments who had chemical suits."

"We tried to plug the leak. But we started losing men. They were dropping. The hospital didn't know how to treat them until we knew what was in the tank."

A frantic search went on for hours to trace the unmarked tank, while the firemen worked to seal it up. The area was sealed off.

After the emergency was

over, the firemen took off their gas masks and went home. Only gradually over the months did they realize the frightening danger they were in.

The lingering and delayed effects of methol-bromide gas poisoning hang over the heads of all of them. They undergo monthly examinations, and these have showed erratic brain waves, loss of memory and other symptoms.

Chief Weare says it is "too early" to tell what the total bill in medical care, misery and heartache will be from the unmarked small tank that would have made an attractive Danish-modern fireplace.

June 1, 1976

To : Keith Maddy
From : S. A. Peoples
Subject : The methyl Bromide poisoning Incident at Belmont
on October 5, 1973.

This incident is the subject of a lawsuit which is now being tried in the Superior Court of San Francisco. For this reason the attorney for the plaintiffs,

and his expert witnesses, Dr. Gary G. Kardos, M.D., pulmonary diseases, and Dr. Wilmer Anderson, M.D., neurologist, are reticent about giving the details of their case. Similarly, Dr. Charles Hine, M.D., toxicologist for the defense is guarded in his statements so that much of the information must await the conclusion of the trial. The facts may never be clearly established since the medical experts disagree as to the degree of injury sustained by the firemen.

History of the Case

This information was obtained from newspaper clippings from the San Francisco Chronicle of Oct. 6, 1973 and Nov. 14, 1974. A conversation with an unnamed Belmont fireman on May 20, 1976 and Stephen Hedner, attorney for the firemen, plaintiffs in the lawsuit May 24, 1976. company

An exterminator/named Neil A. Maclean, Inc. who used methyl bromide moved out of a shop which was subsequently taken over by the Howard Tire Shop, leaving behind an unlabeled tank containing methyl bromide. According to

June 1, 1976

Keith Maddy

Attorney Redner, this tank did not contain the original mixture of methyl bromide and chlorpicrin used for fumigation but was partially filled with a petroleum compound, probably gasoline into which partially filled tanks of methyl bromide-chlorpicrin were emptied. This mixture had a lower vapor pressure than pure methyl bromide and apparently was to be used to exterminate rats with the gasoline being used to reduce the volatility of the methyl bromide. The tank was not labelled.

Mr. who has a sign shop in the same building obtained the tank with the intent of making a "stand-up" fireplace and rolled the tank into a nearby vacant lot and unscrewed the top valve. The gas mixture poured out and the Belmont fire department was called. They wore full protective clothing including "Scott" masks which have a cannister according to the Belmont fireman on May 20, 1976. It is not clear how long the firemen were exposed to the fumes but the high concentration over that time period may have exceeded the capacity of the cannisters since they break down in 31 minutes at 5 ppm as compared to 150 minutes for CCl_4 . (Ind. Health, 4:45-55 1966 Kawasaki Jap from Chem. Abstracts 66:58660 1967). Apparently a highway patrolman and bystanders were exposed to the gas with 14 being seen at Sequoia Hospital in Redwood City, 3 at Cnope Community Hospital and one at Stanford-Palo Alto Hospital. The symptoms varied but included nausea and vomiting, dizziness, chest discomfort and eye irritation.

The firemen subsequently developed serious pulmonary and nervous system disorders of different types, the details of which must wait the conclusion of the trial. It is known that two firemen are on permanent disability due to respiratory damage and others have less severe pulmonary difficulties. The chronic nervous system changes which many of the men exhibit are more serious, involving memory loss, headaches; "debility", personality changes and neurological damage. Several men have been divorced due to these changes.

Dr. Hine takes the view that while it is well known that methyl bromide poisoning can give rise to reversible neurological changes such as diplopia and ataxia, these particular men have complaints related to the litigation rather than poisoning and denies their importance. On the other hand the neurologist, Dr. Wilmer Anderson, finds altered EEG tracings and neurological damage, and Dr.

finds measureable decrease in pulmonary function.

That exposure to methyl bromide can cause lasting neurological and personality damage is supported by a paper by Dr. C. H. Hine in 1969 where he reviewed 10 cases he had evaluated between 1957-1966 in the J. of Occupational Medicine 11:1-10 1969. The six cases that survived exhibited various degrees of dizziness, mood swings, loss of libido, ataxia, dementia, neuresthenia and easy fatiguability which lasted 18 months or longer.

The blood levels of bromide were elevated in all cases and were roughly proportional to the degree of exposure.

It was suggested that workers near fumigation areas be monitored periodically for blood bromide. Workers should wear masks when entering fumigation areas and be aware that the cannister is only good for 2 hours. Such workers should be considered a special risk group and have a medical examination at least once a month.

In reply to my letter of May 14 concerning the use of methyl bromide in green houses, Dr. Hine made the following suggestions:

1. Use an outside means for ventilating the fumigated area.
2. The signs of early intoxication are very subtle and initial entry into a greenhouse should be with a respirator with a chemical cartridge.
3. Protective clothing is not necessary. (Apparently skin absorption at these concentrations is negligible).

His conclusion, with which I concur, is that methyl bromide is a highly toxic substance capable of producing lasting psychiatric and neurological disability. It should only be used where it can be under complete control and where the workers are aware of its danger. Where exposure to levels over 20-100 ppm is necessary a mask should be used with a chemical cartridge. The time limitation of the cartridge must be known. A satisfactory method of monitoring the methyl bromide level in a working area should be developed since small breaks in technic can produce levels of 100 - 400 ppm.